

REMARKS

Objection to Title

The examiner objected to the title for not being descriptive. The title has been amended in response to this objection.

Claim Rejections – 35 USC §112

The examiner rejected claim 5 under 35 USC §112, second paragraph, as indefinite because the phrase “the first direction” lacks antecedent basis. The applicant respectfully disagrees. Claim 5 depends from claim 3, and claim 3 depends from claim 2 which recites in line 6 “rotating the shipping comb in a first direction”. The rejection should be withdrawn.

Claim Amendments

The claims have been amended without altering their scope in order to clarify the features of applicant’s inventions. The phrase “a shipping comb attached to the actuator arm that limits relative vertical motion of the suspension” is supported by FIG. 4B of the specification and accompanying description.

Claim Rejections – 35 USC §102

The examiner rejected claims 1-8, and 10-14 under 35 USC 102(b) as anticipated by Perry (4,851,943). The applicant respectfully traverses these rejections.

Claim 1 recites a head stack assembly (HSA) for use in a disk drive comprising a multi-level shipping comb which facilitates insertion of a merge tool used to merge the HSA with the disk during manufacturing of the disk drive. Thus, claim 1 recites the multi-level shipping comb as being distinct from the merge tool. The examiner asserts Perry discloses, in FIGs. 2 and 3, a merge tool 100 used to merge an HSA with disks.

The examiner then asserts the merge tool is also a multi-level shipping comb. This statement is incongruent since the merge tool 100 disclosed by Perry cannot be considered both a shipping comb and a merge tool. The rejection should be withdrawn.

In addition, the merge tool 100 disclosed by Perry cannot be considered a shipping comb because the merge tool 100 engages the HSA only during manufacturing of the disk drive, and not during shipping of the HSA as recited in claim 1.

Although the merge tool 100 disclosed by Perry comprises a finger (guide 120 and blade 125) for contacting the suspension 22 during the merge operation, the finger does not comprise a first surface for contacting the suspension to protect against overstressing the suspension during shipping, and a second surface for contacting the suspension during manufacturing. In Perry (FIG. 10 and col. 6, lines 1-13), only the surface of the blade 125 contacts the suspension 22 during the merge operation. As shown in FIGs. 7, 9, and 10, no surface of the guide 120 ever contacts the suspension 22. In addition, the surface that contacts the suspension 22 (the blade 125 in FIG. 10) does not comprise first and second surfaces, wherein the second surface is raised relative to the first surface. Further, nowhere does Perry disclose or suggest a first surface for contacting the suspension to protect against overstressing the suspension during shipping, and a second surface for contacting the suspension during manufacturing. The rejection should therefore be withdrawn.

Regarding claim 2, the examiner asserts that Perry discloses, at col. 5, lines 26-60, rotating the shipping comb in a first direction until the latching member latches onto the side of the actuator arm and the first surface of the finger (120 and 125) contacts the suspension. This interpretation of Perry is incorrect. This paragraph merely discloses the initial mechanical positioning of the merge tool 100, and in no way describes the finger contacting the suspension 22. In contrast, Perry states, at col. 5, lines 53-60, that after the rotating operation,

"the guides 120 are now positioned such that their ends 200 extend between flexible arms 22. At this point, it will be appreciated that loader 100 is simply being mechanically positioned on actuator arm 25, and that the position of magnetic heads 20 has not been affected."

Therefore, Perry teaches that the finger of the loader 100 is not contacting the suspension 22 after the rotating operation (the position of the magnetic heads 20 has not been affected). The rejection should therefore be withdrawn.

Regarding claim 3, the examiner asserts Perry discloses in FIG. 4 the shipping comb 100 being actuated by rotating the shipping comb 100 so that the second surface contacts the suspension 22 thereby bending the suspension 22 in a vertical direction to facilitate the insertion of a merge tool. This interpretation of Perry is incorrect. FIG. 4 of Perry merely shows the initial position of the loader 100 (merge tool) once placed on the actuator arm 25 (col. 5, lines 9-10). As described above, the only part of the finger that contacts the suspension to bend the suspension 22 in a vertical direction is when the blade 125 contacts the suspension during the merge operation as shown in FIG. 10 (col. 6, lines 1-13). Since the blade 125 does not comprise a first surface for contacting the suspension 22 during shipping, and a second surface for contacting the suspension 22 during manufacturing, the rejection should be withdrawn.

Regarding claim 6, the examiner asserts Perry discloses in FIG. 10 a second surface comprising a beveled surface with respect to the first surface, wherein the suspension 22 slides over the beveled surface when the shipping comb 100 is actuated. This interpretation of Perry is incorrect. As described above, the only surface of the finger that contacts the suspension 22 in FIG. 10 of Perry are the blades 125 after being forced through the guides 120 (col. 6, lines 1-5). Nowhere does Perry disclose or suggest that the blades 125 comprise first and second surfaces for contacting the suspension 22,

let alone that the second surface comprises a beveled surface. The rejection should be withdrawn.

Regarding claim 8, the examiner asserts Perry discloses, at col. 6, lines 14-26, that after the merge tool is inserted, the shipping comb is detached from the actuator arm 25 causing the suspension 22 to retract vertically and engage the merge tool. This interpretation of Perry is incorrect. As described above, Perry's loader 100 is the merge tool, not a shipping comb. In addition, nowhere does Perry disclose to detach a shipping comb from an actuator arm so that the suspensions engage a merge tool. At col. 6, lines 14-26, Perry is merely describing how the loader 100 (merge tool) is detached from the actuator arm 25 to "permit the heads to be naturally supported by the disks 16 as shown in FIG. 11." (See col. 6, lines 21-22). The rejection should therefore be withdrawn.

Regarding claim 10, the examiner asserts Perry shows in FIG. 2 a shipping comb having a finger (120 and 125) including an arcuate shape such that the first and second surfaces comprise an arcuate shape. This interpretation of Perry is incorrect. As described above, the only surface that contacts the suspension 22 in Perry is the surface of the blades 125 (FIG. 10) which does not have an arcuate shape. The rejection should be withdrawn.

Regarding claim 11, Perry does not disclose or suggest all of the steps recited in the claim, including actuating the shipping comb to bend the suspension in a vertical direction to facilitate the insertion of a merge tool comprising a finger for engaging the suspension, inserting the merge tool such that the finger of the merge tool moves into position without scraping against the suspension, and detaching the shipping comb from the actuator arm wherein the suspension retracts vertically and engages the finger of the merge tool. The rejection should be withdrawn.

Claim Rejections – 35 USC §103

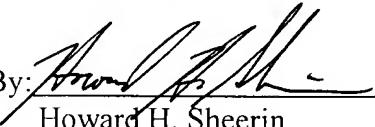
The examiner rejected claims 9 and 15 under 35 USC §103(a) as unpatentable over Perry. The rejection of these claims should be withdrawn for at least the reasons set forth above. In addition, the rejection should be withdrawn since the examiner has failed to establish a *prima facie* case of obviousness. The examiner has taken “official notice” of coatings to reduce friction, but fails to identify any prior art reference that suggests a desirability for manufacturing a shipping comb with a coating to reduce friction. “The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.” (*In re Fritch* 972 F.2d 1260; 23 U.S.P.Q.2D (BNA) 1780 (1992).) The rejection should therefore be withdrawn.

CONCLUSION

The above amendments to the specification and claims do not add new matter or raise new issues; the applicant respectfully requests the examiner to enter the amendments. In view of the foregoing remarks, the rejections should be withdrawn. The examiner is encouraged to contact the undersigned over the telephone in order to resolve any remaining issues that may prevent the immediate allowance of the present application.

Respectfully submitted,

Date: 12/22/05 By:

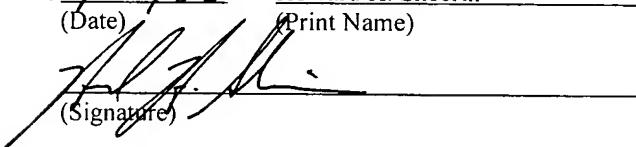

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on:

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